

# Aeronautical Systems Center

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*Rapidly delivering war-winning capability*



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**Large Aircraft IRCM  
Speed and Innovation  
for the Warfighter**

**23 Mar 04**

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# Large Aircraft Infrared Countermeasures (LAIRCM)



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## Feb 04 LAIRCM Cost Performance Data

Cost Variance = \$13.6M  
Schedule Variance = \$1.2M  
Contract MR = \$.9M  
Percent Complete = 83.2%  
Contract Value = \$100M



11 LAIRCM C-17s fielded 30 months after contract award!2



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# Speed and Innovation for Warfighter



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- **LAIRCM Alternate Proposal led to “Faster, Cheaper, Less Risk”**
- **Leveraging existing C-130 integration design saved time & money**
- **LAIRCM “Lite” innovation protects more aircraft earlier**
- **New Quick Reaction Program increases protection for more aircraft in the shortest amount of time**
- **Underrun incentive is a powerful tool for faster, cheaper results**





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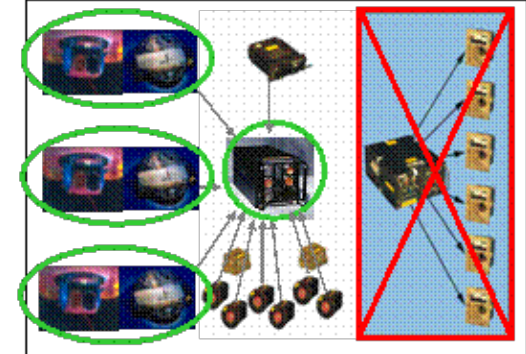
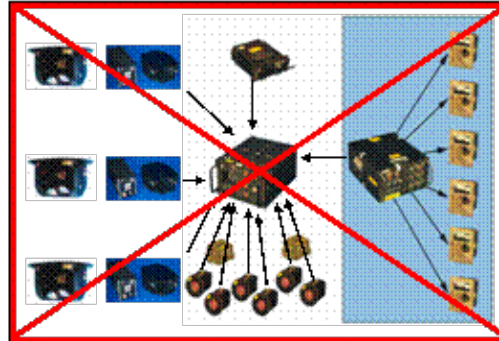
# Innovation for Results Now!



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## 1. Alternate Solution on Contract

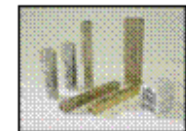
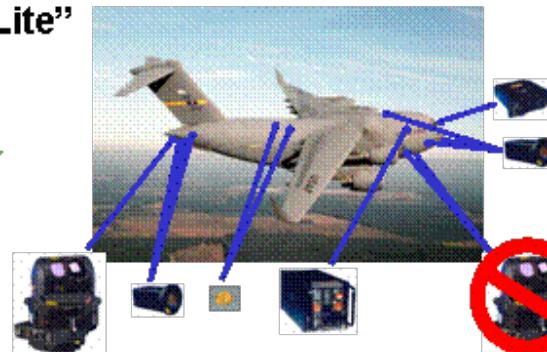
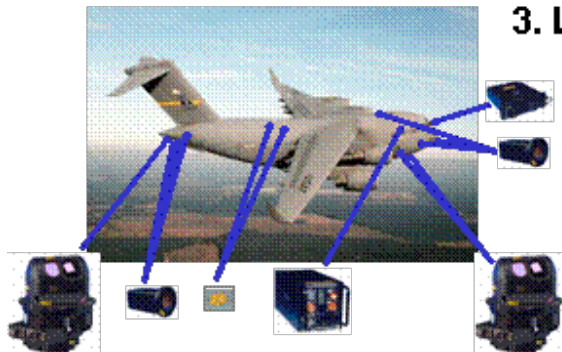
- Customer wanted "Point" solution
- Contractor alternate proposals allowed
- Awarded contract for alternate solution
- Alternate, performance-based solution was faster, cheaper, less risk
- AMC requirements met with alternate



## 2. Leveraged Existing C-130 Design

- U.S. SOCOM modified AFSOC C-130s with DIRCM
- LAIRCM alternate solution very similar to DIRCM
- Leverage AC/MC-130 design for AMC C-130Hs
- Saved \$12M in design & development
- Delivers C-130 capability 13 months early

## 3. LAIRCM "Lite"





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# LAIRCM Program Acceleration

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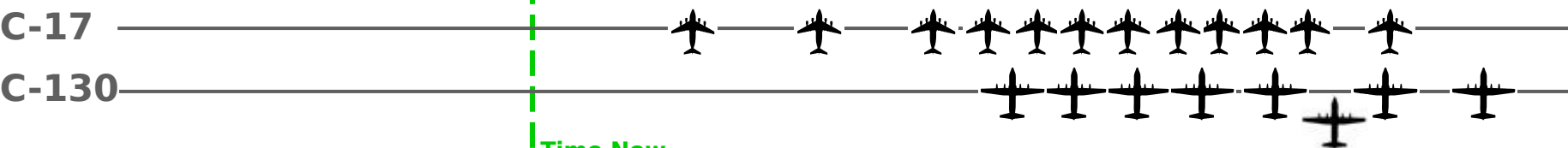
CY03

CY04

CY05

CY06

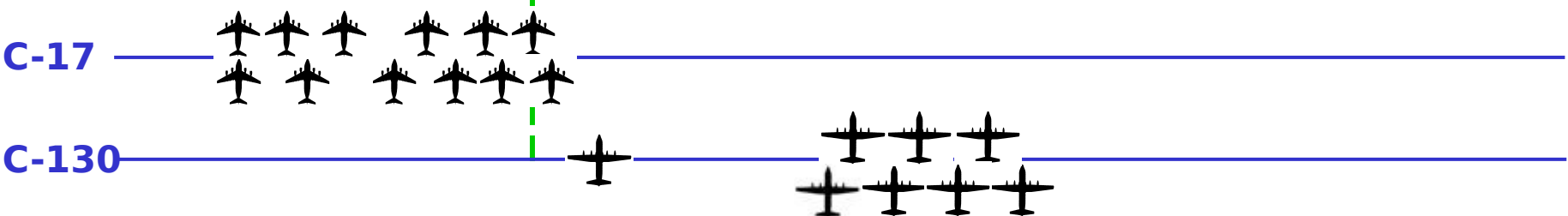
## Baseline LAIRCM Contract (Sep 01)



## Challenge Schedule (Jan 02)



## Combat Mission Need (Dec 02) - Current LAIRCM "Lite" Effort





# New Quick Reaction Initiative

(Protect the most aircraft in shortest time)



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CY03

CY04

CY05

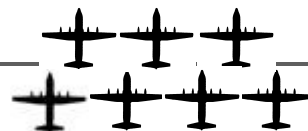
CY06

Combat Mission Need (Dec 02) - Current Program Effort

C-17



C-130



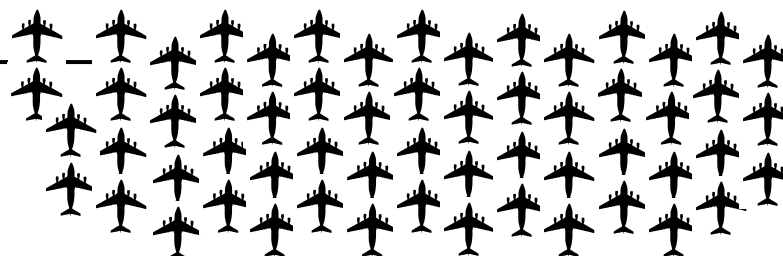
Time Now

C-17 "Lite" Extension QRC

C-17



12 C-17 "Lites"  
from Baseline Program



59 Add'l LAIRCM "Lite"  
C-17s by using available  
H/W, procuring add'l H/W

15 Months

Award  
Jul 04

Dec 04  
1<sup>st</sup> A/C  
C-17 #13

Mar 06  
59th A/C  
C-17 #71



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# Large Aircraft Infrared Countermeasures Program



## Incentive Strategy

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## The LAIRCM Underrun Incentive

**A “Power Tool” for Results  
Now!**



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# Overview

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- **LAIRCM contract awarded for an alternate solution**
- **Lower risk solution provided opportunity to accelerate**
  - **Opportunity to deliver AMC “urgent need” early**
  - **Acceleration could also reduce funding risk due to late fiscal year contract award (28 Sep 01); late expenditures**
- **Immediately after award, explored opportunity with Ktr**
  - **Challenged Ktr to accelerate ⇒ Built Challenge Schedule**
  - **Ensure Challenge Schedule within budget ⇒ Executable**
  - **Motivate Challenge Schedule ⇒ New Incentive**
    - **Graduated incentive based on # of months early**
    - **Incentive pool created from underrun dollars**
  - **Underrun Incentive** in addition to Base and Award Fees

**No new money added to the Contract!**





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# Challenge Schedule

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- **Northrop and SPO optimized the schedule**

- Procure hardware early
- Reduce schedule slack
- Serial tasks, now parallel
- Found smarter ways

Baseline Schedule

**43 Months EMD**

Challenge Schedule

**30 Months**

... Early Production

- **Challenge schedule drafted**

- Potential to complete development 13 mos early
- Earlier production and operational capability

**Contractor can often accelerate, but needs incentive to assume additional schedule risk**



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# Baseline vs Challenge Schedules

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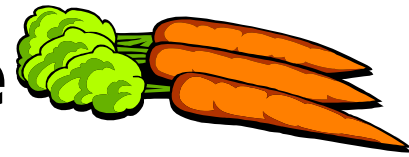
CY02		CY03		CY04		CY05		CY06	
FY02		FY03		FY04		FY05		FY06	
<b>LAIRCM Baseline Contract Development &amp; Production Schedules</b>									
				4/28/04					
		Group B Development for C-17 #1				10/28/04			12/31/06
		Group B Development for C-17 #2				Production C-17 #3-12			
		Group B Development for C-130 #1					Production C-130 #2-8		
						4/28/05			
<b>LAIRCM Challenge Development &amp; Production Schedules</b>									
				12/23/03 (4 Mos Earlier)					
		Group B Development for C-17 #1			1/9/04 (10 Mos Earlier)				
		Group B Development for C-17 #2 (P41)			Prod C-17 #3-12 11/10/04 (25 Mos Earlier)				
		Group B Development for C-130 #1			C-130 #2-8		6/15/05 (18 Mos Earlier)		
				3/15/04 (13 Mos Earlier)					

**12-14 month development acceleration possible!**



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# Create Incentive



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**New incentive clause motivates contractor to complete development early, under cost, while meeting requirements...**

**The reward: % of **underrun** paid to contractor as more profit...**

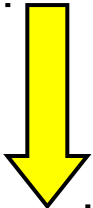
**% determined by # of months program accelerated**

## Contract Schedule

**43 Months EMD**

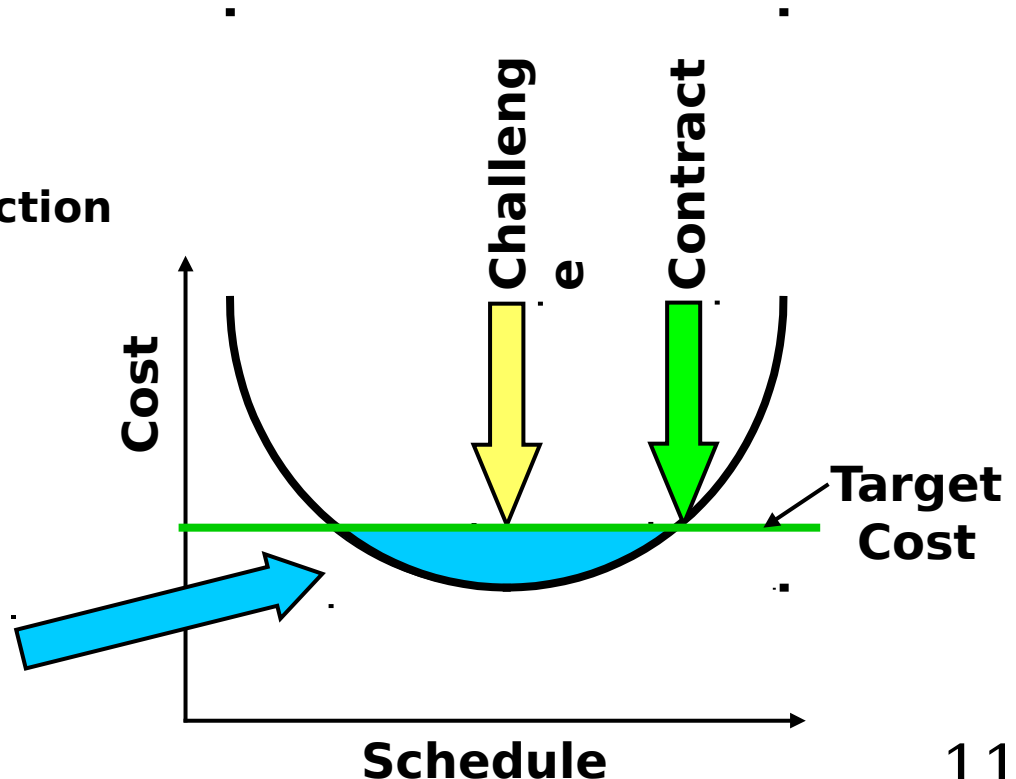
## Challenge Schedule

**30 Months** ... Early Production



## Create Incentive Pool:

- Level of effort manpower savings
- Risk management savings
- Small, high performing team
- Leverage resources and



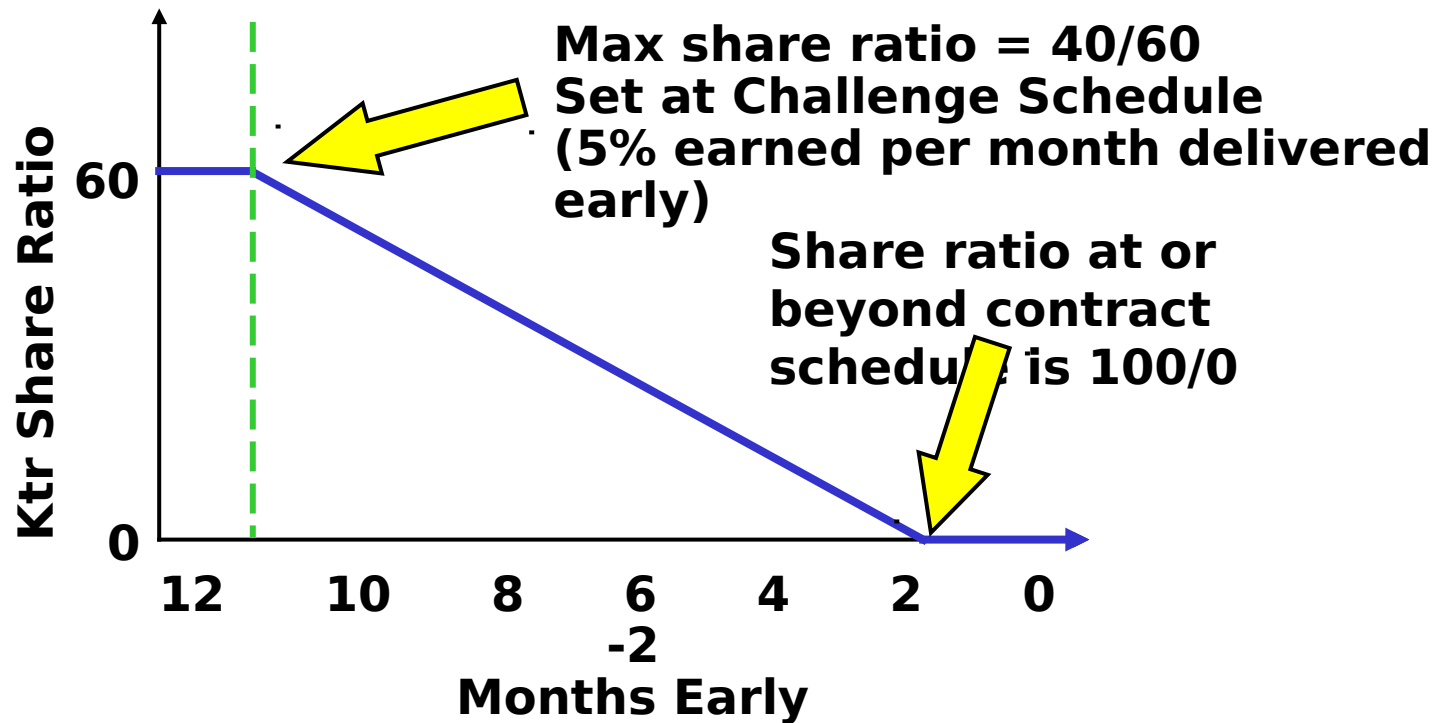


# Incentive Sharing

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**Share ratio based on # of months development completed early**

- The more months... the greater share



**Number of months delivered early is determined for each key development CLIN -- underrun pools are segregated by CLIN**



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# Incentive Payment

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- **Paid in two increments:**
  - **After CLIN acceptance (DD250), 75% of the estimated incentive is paid within 90 days**
    - Allows time for cost verification audit
    - Allows time for contract mod transferring funds from deliverable CLIN to incentive subCLINs
  - **One year after all CPAF CLINs are complete, the remaining incentive is paid**
    - Allows capturing all outstanding bills
    - Allows reconciliation if problem arises during OT&E
    - Ensures no outstanding production transition issue which should have been paid in development





# Unintended Consequences Addressed

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- **Deficient products could be delivered early to maximize a schedule incentive**
  - **Solution: 1) DD250 must be signed, 2) time to correct deficiencies is subtracted from early delivery time (including IOT&E) -- incentive recalculated; if necessary, incentives are paid back with interest**
- **Contract performance could be traded for early delivery to get schedule incentive**
  - **Solution: 1) DD250s still must be signed, 2) Baseline contract award fee process motivates baseline contract performance**
- **Are we allowing contractor to double dip on cost and schedule performance with both underrun incentive and award fee?**
  - **No... underrun incentive is for delivering early, under cost, while meeting performance. Award fee is for delivering per baseline contract... on-time, at target cost, while meeting performance**



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# Summary

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- **Warfighter needs capability NOW!!!**
- **Late FY contract award created execution “bow wave”**
  - Needed to accelerate spending -- accelerate schedule!
- **Needed “carrot” to motivate faster schedule achievement!**
- **New innovation - Challenge Schedule Underrun Incentive**
  - Motivates delivering under cost and ahead of schedule
  - DD250 government acceptance required -- performance delivered
  - Rewards acceleration with additional profit
  - Cost underrun creates incentive pool; **No New Money Required!**
- **Everybody wins**
  - Customer gets warfighting capability faster - **RESULTS NOW!**
  - Acquisition more responsive to customer, with better execution
  - Contractor gets additional profit, in production earlier

**WIN! WIN! WIN!**



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# Conclusion

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- **Underrun incentive not a panacea for every program**
- **Useful for CPAF/CPIF programs (no fee ceiling)**
  - Programs with low-to-moderate risk; where acceleration possible
  - Evolutionary acquisition programs delivering “success in increments”
- **Must have funding profile that supports acceleration**
  - Don’t over-accelerate; there is a point of diminishing returns
- **Consider clause timing ⇒ post-award**
- **Motivates contractor to:**
  - Accelerate while seeking cost cutting opportunities
  - Work harder and “breed innovation”
- **Final note: encourage contractor to share with employees**

**A “Power Tool” for Faster, Cheaper, Better!**



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# Achieving the Goal

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# Large Aircraft Infrared Countermeasures (LAIRCM)

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